

From the INTERNATIONAL BUREAU

US - Connolly

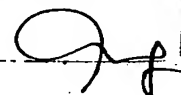
**PCT**

**NOTIFICATION OF TRANSMITTAL  
OF COPIES OF TRANSLATION  
OF THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT  
(PCT Rule 72.2)**

To:

DÖRPER, Thomas  
c/o BASF Aktiengesellschaft  
67056 Ludwigshafen  
ALLEMAGNE

Patente, Marken u. Lizenzen  
17. Mai 2005



Date of mailing (day/month/year)  
12 May 2005 (12.05.2005)

Applicant's or agent's file reference  
0000054058

**IMPORTANT NOTIFICATION**

International application No.  
PCT/EP2003/009106 ✓

International filing date (day/month/year)  
18 August 2003 (18.08.2003) ✓

Applicant

Phase breudet

SUNGEE GMBH &amp; CO. KGAA et al

AST

10.02.2005

**1. Transmittal of the translation to the applicant.**

The International Bureau transmits herewith a copy of the English translation made by the International Bureau of the international preliminary examination report established by the International Preliminary Examining Authority.

**2. Transmittal of the copy of the translation to the elected Offices.**

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following elected Offices requiring such translation:

AZ, CA, CH, CN, CO, GH, KG, KP, KR, MK, MZ, RU, TM

The following elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, BA, BB, BG, BR, BY, BZ, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EP, ES, FI, GB, GD, GE, GM, HR, HU, ID, IL, IN, IS, JP, KE, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MN, MW, MX, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, SC, SD, SE, SG, SK, SL, SY, TJ, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

**3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).**

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report.

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Authorized officer

Ellen Moyse

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UK

Translation

PATENT COOPERATION TREATY

PCT/EP2003/009106



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 0000054058	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/009106	International filing date (day/month/year) 18 August 2003 (18.08.2003)	Priority date (day/month/year) 20 August 2002 (20.08.2002)
International Patent Classification (IPC) or national classification and IPC C12P 23/00		
Applicant SUNGENE GMBH & CO. KGAA		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 7 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of \_\_\_\_\_ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☒ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 18 March 2004 (18.03.2004)	Date of completion of this report 15 March 2005 (15.03.2005)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/009106

## I. Basis of the report

### 1. With regard to the elements of the international application:\*

- ☐ the international application as originally filed
- ☒ the description:  
 pages 1-91, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the claims:  
 pages 1-46, as originally filed  
 pages \_\_\_\_\_, as amended (together with any statement under Article 19  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the drawings:  
 pages 1/18-18/18, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

### 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

### 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☒ contained in the international application in written form.
- ☒ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☒ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☒ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

### 4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

### 5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/009106

## III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application.

☒ claims Nos. 39-46

because:

☐ the said international application, or the said claims Nos. \_\_\_\_\_  
relate to the following subject matter which does not require an international preliminary examination (*specify*):

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. \_\_\_\_\_  
are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. \_\_\_\_\_ are so inadequately supported  
by the description that no meaningful opinion could be formed.

☒ no international search report has been established for said claims Nos. 39-46

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

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## IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.
- ☐ paid additional fees.
- ☐ paid additional fees under protest.
- ☐ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.
- ☒ not complied with for the following reasons:

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☐ all parts.
- ☒ the parts relating to claims Nos. 1-38

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.  
PCT/EP 03/09106

**Supplemental Box**  
(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: BOX III.1.

## Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The International Searching Authority has determined that this international application contains four inventions (see the request to pay additional fees dated the 26 April 2004).

Since the applicant did not pay any additional search fees, an international search report (ISR) was established only in relation to invention 1 (i.e. the subject matter of claims 1 to 38).

The applicant is advised that claims or parts thereof relating to inventions in respect of which no international search report (ISR) has been established cannot be the subject of an international preliminary examination (PCT Rule 66.1(e)). In its capacity as International Preliminary Examining Authority the EPO generally will not carry out a preliminary examination for subjects that have not been searched.

Since the International Examining Authority shares the opinion of the International Searching Authority, the international preliminary examination is restricted to the searched subject matter as defined above.

**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

International application No.  
PCT/EP 03/09106

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: BOX IV.3.

**Lack of unity of invention**

See Box III.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP 03/09106

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims	9-15, 30	YES
	Claims	1-8, 16-29, 31-38	NO
Inventive step (IS)	Claims	9-15, 30	YES
	Claims	1-8, 16-29, 31-38	NO
Industrial applicability (IA)	Claims	1-38	YES
	Claims		NO

**2. Citations and explanations****1. Reference is made to the following document:**

D1: EP-A-0 735 137, 2 October 1996 (1996-10-02)

**2. Novelty (PCT Article 33(2)):**

Document D1 discloses a method for producing keto carotenoids by cultivating organisms that have a modified ketolase activity. This modified activity is caused by an Agrobacterium ketolase (crtW) that has 43.6% identity with the sequence SEQ ID NO:2 (see pages 3 to 6, pages 16 to 21 and pages 22 to 24). D1 thus prejudices the novelty of claims 1 to 8, 16 to 29 and 31 to 38.

**3. Inventive step (PCT Article 33(3)):**

The applicant should note that if novelty were to be again established, the subject matter of claims 1 to 38 would be inventive, since the prior art contains nothing to indicate the use of a ketolase with the sequence SEQ ID NO:2 in a method for producing keto carotenoids and since the use of this enzyme leads to a carotenoid pattern which is



distinctly different from the prior art carotenoid pattern.

4. **Clarity and support (PCT Articles 5 and 6):**

Contrary to PCT Articles 5 and 6, claim 1 (and also claims 25, 28 and 29) is not supported by the description, since the scope of the claim goes beyond that justified by the description and the examples. The claim covers all organisms that have (a modified) ketolase activity, although the invention was disclosed only in relation to Escherichia coli (and plants). In addition, the word organism also covers human beings, whereby this claim would include subject matter which at least under European law would be considered immoral (see also PCT Rule 9.1).